Amendments

In the Claims:

Claims 1-34 (Cancelled).

35. (Currently amended): A method of producing a nucleic acid molecule comprising:

(a) providing a first nucleic acid molecule comprising at least a first gene or portion thereof and at least a first recombination site;

(b) providing a second nucleic acid molecule comprising at least a second gene or portion thereof and at least a second recombination site; and

(c) forming a mixture *in vitro* between said first and second nucleic acid molecules and at least one recombination protein, under conditions sufficient to cause recombination *in vitro* between said first and second recombination sites, thereby producing a third nucleic acid molecule in which said first and second genes or portions thereof are operably linked to form a functional gene,

wherein said at least one recombination protein is not a transposase.

36. (Previously presented): The method of claim 35, wherein said first gene or portion thereof, or said second gene or portion thereof, encodes a selectable marker.

37. (Previously presented): The method of claim 35, wherein said first gene or portion thereof, or said second gene or portion thereof, is an antibiotic resistance gene or a portion thereof.

38. (Previously presented): The method of claim 37, wherein said antibiotic resistance gene or portion thereof, is selected from the group consisting of a chloramphenicol resistance gene or a portion thereof, an ampicillin resistance gene or a portion thereof, a methicillin resistance gene or a portion thereof, a tetracycline resistance gene or a portion thereof and a kanamycin resistance gene or a portion thereof.

39. (Previously presented): The method of claim 37, wherein said antibiotic resistance gene or portion thereof, is a chloramphenicol resistance gene or a portion thereof.

40. (Previously presented): The method of claim 35, wherein said first gene or portion thereof or said second gene or portion thereof comprises a promoter.

41. (Previously presented): The method of claim 35, wherein said first or second genes or portions thereof are structural genes or portion thereof.

42. (Previously presented): The method of claim 35, wherein said first gene or portion thereof, or said second gene or portion thereof, encodes a heterodimeric gene product or a portion thereof.

43. (Previously presented): The method of claim 35, wherein said first and second recombination sites are selected from the group consisting of *lox* sites, *att* sites, and mutants thereof.

44. (Previously presented): The method of claim 35, wherein said first and second recombination sites are selected from the group consisting of *lox* sites and *att* sites.

45. (Previously presented): The method of claim 35, wherein said first and second recombination sites are *lox* sites.

46. (Previously presented): The method of claim 45, wherein said *lox* sites are *lox*P sites.

47. (Previously presented): The method of claim 35, wherein said first and second recombination sites are *att* sites.

48. (Previously presented): The method of claim 47, wherein said *att* sites are selected from the group consisting of *att*B sites, *att*P sites, *att*L sites and *att*R sites.

49. (Previously presented): The method of claim 35, wherein said first nucleic acid molecule or said second nucleic acid molecule further comprises at least one additional recombination site.

50. (Previously presented): The method of claim 49, wherein said at least one additional recombination site is selected from the group consisting of *lox* sites and *att* sites.

51. (Previously presented): The method of claim 49, wherein said at least one additional recombination site is a *lox* site or a mutant thereof.

52. (Previously presented): The method of claim 49, wherein said at least one additional recombination site is a *lox* site.

53. (Previously presented): The method of claim 52, wherein said *lox* site is a *lox*P site.

54. (Previously presented): The method of claim 49, wherein said at least one additional recombination site is an *att* site or a mutant thereof.

55. (Previously presented): The method of claim 49, wherein said at least one additional recombination site is an *att* site.

56. (Previously presented): The method of claim 55, wherein said *att* site is selected from the group consisting of an *att*B site, an *att*P site, an *att*L site and an *att*R site.

57. (Currently amended): The method of claim 35, wherein said first gene or portion thereof is located immediately adjacent to said first recombination site.

58. (Currently amended): The method of claim 35, wherein said second gene or portion thereof is located immediately adjacent to said second recombination site.

59. (Previously presented): The method of claim 35, wherein said first nucleic acid molecule or said second nucleic acid molecule comprises at least one cloning site.

60. (Previously presented): The method of claim 35, wherein said at least one recombination protein is selected from the group consisting of Cre, Int, IHF, Xis, FLP, γδ, Tn3 resolvase, Hin, Gin, Cin and combinations thereof.

61. (Previously presented): The method of claim 35, wherein said at least one recombination protein is Cre.

62. (Previously presented): The method of claim 35, wherein said at least one recombination protein is selected from the group consisting of Int, IHF and Xis.

63. (Previously presented): The method of claim 35, wherein said at least one recombination protein is Int.

64. (Previously presented): The method of claim 35, wherein said at least one recombination protein is IHF.

65. (Previously presented): The method of claim 35, wherein said at least one recombination protein is Xis.

66. (Previously presented): The method of claim 35, wherein said first nucleic acid molecule or said second nucleic acid molecule or said third nucleic acid molecule is a vector.

67. (Previously presented): The method of claim 66, wherein said vector is an expression vector.

68. (Previously presented): The method of claim 35, wherein said first nucleic acid molecule or said second nucleic acid molecule is linear.

69. (Previously presented): The method of claim 35, wherein said first gene or portion thereof or said second gene or portion thereof is an amplification product.

70. (Previously presented) The method of claim 35, further comprising expressing said functional gene.

71. (Previously presented): The method of claim 35, further comprising contacting at least one host cell with said mixture, and selecting for a host cell comprising said third nucleic acid molecule.

72. (Previously presented): The method of claim 71, further comprising selecting against a host cell comprising said first or said second nucleic acid molecule.

73. (Previously presented): The method of claim 71, further comprising selecting against a host cell comprising said first and said second nucleic acid molecules.

74. (Previously presented): The method of claim 71, further comprising expressing said functional gene in said selected host cell.

75. (Previously presented): The method of claim 71, wherein said host cell is a prokaryotic cell.

76. (Previously presented): The method of claim 71, wherein said host cell is a bacterial cell.

77. (Previously presented): The method of claim 71, wherein said host cell is an *Escherichia coli* cell.

78. (Currently amended): A method of producing a nucleic acid molecule comprising:

(a) providing a first nucleic acid molecule comprising a first portion of an antibiotic resistance gene and at least a first recombination site;

(b) providing a second nucleic acid molecule comprising a second portion of said antibiotic resistance gene and at least a second recombination site; and

(c) forming a mixture between said first and second nucleic acid molecules and at least one recombination protein, under conditions sufficient to cause recombination between said first and second recombination sites, thereby producing a third nucleic acid molecule in which said first and second portions of said gene are operably linked to form a functional antibiotic resistance gene,

wherein said at least one recombination protein is not a transposase.

79. (Previously presented): The method of claim 78, wherein said antibiotic resistance gene is selected from the group consisting of a chloramphenicol resistance gene, an ampicillin resistance gene, a methicillin resistance gene, a tetracycline resistance gene and a kanamycin resistance gene.

80. (Previously presented): The method of claim 78, wherein said antibiotic resistance gene is a chloramphenicol resistance gene.

81. (Previously presented): The method of claim 78, wherein said first or second portion of said gene comprises a promoter.

82. (Previously presented): The method of claim 78, wherein said first and second recombination sites are selected from the group consisting of *lox* sites, *att* sites, and mutants thereof.

83. (Previously presented): The method of claim 78, wherein said first and second recombination sites are selected from the group consisting of *lox* sites and *att* sites.

84. (Previously presented): The method of claim 78, wherein said first and second recombination sites are *lox* sites.

85. (Previously presented): The method of claim 84, wherein said *lox* sites are *lox*P sites.

86. (Previously presented): The method of claim 78, wherein said first and second recombination sites are *att* sites.

87. (Previously presented): The method of claim 86, wherein said *att* sites are selected from the group consisting of *att*B sites, *att*P sites, *att*L sites and *att*R sites.

88. (Previously presented): The method of claim 78, wherein said first nucleic acid molecule or said second nucleic acid molecule further comprises at least one additional recombination site.

89. (Previously presented): The method of claim 88, wherein said at least one additional recombination site is selected from the group consisting of *lox* sites and *att* sites.

90. (Previously presented): The method of claim 88, wherein said at least one additional recombination site is a *lox* site or a mutant thereof.

91. (Previously presented): The method of claim 88, wherein said at least one additional recombination site is a *lox* site.

92. (Previously presented): The method of claim 91, wherein said *lox* site is a *lox*P site.

93. (Previously presented): The method of claim 88, wherein said at least one additional recombination site is an *att* site or a mutant thereof.

94. (Previously presented): The method of claim 88, wherein said at least one additional recombination site is an *att* site.

95. (Previously presented): The method of claim 94, wherein said *att* site is selected from the group consisting of an *att*B site, an *att*P site, an *att*L site and an *att*R site.

96. (Currently amended): The method of claim 78, wherein said first portion of said gene is located immediately adjacent to said first recombination site.

97. (Currently amended): The method of claim 78, wherein said second portion of said gene is located immediately adjacent to said second recombination site.

98. (Previously presented): The method of claim 78, wherein said first nucleic acid molecule or said second nucleic acid molecule comprises at least one cloning site.

99. (Previously presented): The method of claim 78, wherein said at least one recombination protein is selected from the group consisting of Cre, Int, IHF, Xis, FLP, γδ, Tn3 resolvase, Hin, Gin, Cin and combinations thereof.

100. (Previously presented): The method of claim 78, wherein said at least one recombination protein is Cre.

101. (Previously presented): The method of claim 78, wherein said at least one recombination protein is selected from the group consisting of Int, IHF and Xis.

102. (Previously presented): The method of claim 78, wherein said first nucleic acid molecule or said second nucleic acid molecule or said third nucleic acid molecule is a vector.

103. (Previously presented): The method of claim 102, wherein said vector is an expression vector.

104. (Previously presented): The method of claim 78, wherein said first nucleic acid molecule or said second nucleic acid molecule is linear.

105. (Previously presented): The method of claim 78, wherein said first or said second portions of said gene are amplification products.

106. (Previously presented): The method of claim 78, further comprising contacting at least one host cell with said mixture, and selecting for a host cell comprising said third nucleic acid molecule.

107. (Previously presented): The method of claim 106, further comprising selecting against a host cell comprising said first or said second nucleic acid molecule.

108. (Previously presented): The method of claim 106, further comprising selecting against a host cell comprising said first and said second nucleic acid molecule.

109. (Previously presented): The method of claim 106, wherein said host cell is a prokaryotic cell.

110. (Previously presented): The method of claim 106, wherein said host cell is a bacterial cell.

111. (Previously presented): The method of claim 106, wherein said host cell is an *Escherichia coli* cell.

112. (Previously presented): The method of claim 78, further comprising introducing said third nucleic acid molecule into a host cell.

113. (Previously presented): The method of claim 78, further comprising introducing said third nucleic acid molecule into a host cell and expressing said antibiotic resistance gene.

114. (Previously presented): The method of claim 113, wherein said host cell is an *Escherichia coli* cell.

115. (Currently amended): A method of producing a nucleic acid molecule comprising:

(a) providing a first nucleic acid molecule comprising at least one promoter and at least a first recombination site;

(b) providing a second nucleic acid molecule comprising at least one antibiotic resistance gene or portion thereof and at least a second recombination site; and

(c) forming a mixture between said first and second nucleic acid molecules and at least one recombination protein, under conditions sufficient to cause recombination between said first and second recombination sites, thereby producing a third nucleic acid molecule in which said promoter and said antibiotic resistance gene or portion thereof are operably linked to form a functional antibiotic resistance gene,

wherein said at least one recombination protein is not a transposase.

116. (Previously presented): The method of claim 115, wherein said antibiotic resistance gene or portion thereof is selected from the group consisting of a chloramphenicol resistance gene or a portion thereof, an ampicillin resistance gene or a portion thereof, a methicillin resistance gene or a portion thereof, a tetracycline resistance gene or a portion thereof and a kanamycin resistance gene or a portion thereof.

117. (Previously presented): The method of claim 115, wherein said antibiotic resistance gene or portion thereof is a chloramphenicol resistance gene or a portion thereof.

118. (Previously presented): The method of claim 115, wherein said first and second recombination sites are selected from the group consisting of *lox* sites, *att* sites, and mutants thereof.

119. (Previously presented): The method of claim 115, wherein said first and second recombination sites are selected from the group consisting of *lox* sites and *att* sites.

120. (Previously presented): The method of claim 115, wherein said first and second recombination sites are *lox* sites.

121. (Previously presented): The method of claim 120, wherein said *lox* sites are *lox*P sites.

122. (Previously presented): The method of claim 115, wherein said first and second recombination sites are *att* sites.

123. (Previously presented): The method of claim 122, wherein said *att* sites are selected from the group consisting of *att*B sites, *att*P sites, *att*L sites and *att*R sites.

124. (Previously presented): The method of claim 115, wherein said first nucleic acid molecule or said second nucleic acid molecule further comprises at least one additional recombination site.

125. (Previously presented): The method of claim 124, wherein said at least one additional recombination site is selected from the group consisting of *lox* sites and *att* sites.

126. (Previously presented): The method of claim 124, wherein said at least one additional recombination site is a *lox* site or a mutant thereof.

127. (Previously presented): The method of claim 124, wherein said at least one additional recombination site is a *lox* site.

128. (Previously presented): The method of claim 127, wherein said *lox* site is a *lox*P site.

129. (Previously presented): The method of claim 124, wherein said at least one additional recombination site is an *att* site or a mutant thereof.

130. (Previously presented): The method of claim 124, wherein said at least one additional recombination site is an *att* site.

131. (Previously presented): The method of claim 130, wherein said *att* site is selected from the group consisting of an *att*B site, an *att*P site, an *att*L site and an *att*R site.

132. (Currently amended): The method of claim 115, wherein said promoter is located immediately adjacent to said first recombination site.

133. (Currently amended): The method of claim 115, wherein said antibiotic resistance gene or portion thereof is located immediately adjacent to said second recombination site.

134. (Previously presented): The method of claim 115, wherein said first nucleic acid molecule or said second nucleic acid molecule comprises at least one cloning site.

135. (Previously presented): The method of claim 115, wherein said at least one recombination protein is selected from the group consisting of Cre, Int, IHF, Xis, FLP, γδ, Tn3 resolvase, Hin, Gin, Cin and combinations thereof.

136. (Previously presented): The method of claim 115, wherein said at least one recombination protein is Cre.

137. (Previously presented): The method of claim 115, wherein said at least one recombination protein is selected from the group consisting of Int, IHF and Xis.

138. (Previously presented): The method of claim 115, wherein said first nucleic acid molecule or said second nucleic acid molecule or said third nucleic acid molecule is a vector.

139. (Previously presented): The method of claim 138, wherein said vector is an expression vector.

140. (Previously presented): The method of claim 115, wherein said first nucleic acid molecule or said second nucleic acid molecule is linear.

141. (Previously presented) The method of claim 115, wherein said gene or portion thereof is an amplification product.

142. (Previously presented): The method of claim 115, further comprising contacting at least one host cell with said mixture, and selecting for a host cell comprising said third nucleic acid molecule.

143. (Previously presented): The method of claim 142, further comprising selecting against a host cell comprising said first or said second nucleic acid molecule.

144. (Previously presented): The method of claim 142, further comprising selecting against a host cell comprising said first and said second nucleic acid molecule.

145. (Previously presented): The method of claim 142, wherein said host cell is a prokaryotic cell.

146. (Previously presented): The method of claim 142, wherein said host cell is a bacterial cell.

147. (Previously presented): The method of claim 142, wherein said host cell is an *Escherichia coli* cell.

148. (Previously presented): The method of claim 115, further comprising introducing said third nucleic acid molecule into a host cell.

149. (Currently amended): The method of claim 115, further comprising introducing said third nucleic acid molecule into a host cell and expressing said antibiotic resistance gene or portion thereof.

150. (Previously presented): The method of claim 149, wherein said host cell is an *Escherichia coli* cell.

151. (Currently amended): A method of producing a nucleic acid molecule comprising:

(a) providing a first nucleic acid molecule comprising at least one promoter and at least a first *lox*P site;

(b) providing a second nucleic acid molecule comprising at least one antibiotic resistance gene or portion thereof and at least a second *lox*P site; and

(c) forming a mixture between said first and second nucleic acid molecules and at least one Cre recombination protein, under conditions sufficient to cause recombination between said first and second *lox*P sites, thereby producing a third nucleic acid molecule in which said promoter and said antibiotic resistance gene or portion thereof are operably linked to form a functional antibiotic resistance gene.

152. (Previously presented): The method of claim 151, wherein said antibiotic resistance gene or portion thereof is selected from the group consisting of a chloramphenicol resistance gene or a portion thereof, an ampicillin resistance gene or a portion thereof, a methicillin resistance gene or a portion thereof, a tetracycline resistance gene or a portion thereof and a kanamycin resistance gene or a portion thereof.

153. (Previously presented): The method of claim 151, wherein said antibiotic resistance gene or portion thereof is a chloramphenicol resistance gene or a portion thereof.

154. (Previously presented): The method of claim 151, further comprising introducing said third nucleic acid molecule into a host cell.

155. (Previously presented): The method of claim 151, further comprising introducing said third nucleic acid molecule into a host cell and expressing said antibiotic resistance gene or portion thereof.

156. (Previously presented): The method of claim 154, wherein said host cell is an *Escherichia coli* cell.

157. (Previously presented): The method of claim 155, wherein said host cell is an *Escherichia coli* cell.

158. (Previously presented): The method of claim 35, wherein said first gene or portion thereof, and said second gene or portion thereof, are the same.

159. (Currently amended): A method of producing a nucleic acid molecule comprising:

(a) providing a first nucleic acid molecule comprising at least one promoter located immediately adjacent to at least a first recombination site;

(b) providing a second nucleic acid molecule comprising at least one gene or portion thereof located immediately adjacent to at least a second recombination site; and

(c) forming a mixture *in vitro* between said first and second nucleic acid molecules and at least one recombination protein, under conditions sufficient to cause recombination *in vitro* between said first and second recombination sites, thereby producing a third nucleic acid molecule in which said at least one promoter and said at least one gene or portion thereof are operably linked to form a functional gene, wherein said at least one recombination protein is not a transposase.

160. (Previously presented): The method of claim 159, wherein said gene or portion thereof, is an antibiotic resistance gene or a portion thereof.

161. (Previously presented): The method of claim 160, wherein said antibiotic resistance gene or portion thereof, is selected from the group consisting of a chloramphenicol resistance gene or a portion thereof, an ampicillin resistance gene or a portion thereof, a methicillin resistance gene or a portion thereof, a tetracycline resistance gene or a portion thereof and a kanamycin resistance gene or a portion thereof.

162. (Previously presented): The method of claim 160, wherein said antibiotic resistance gene or portion thereof is a chloramphenicol resistance gene or a portion thereof.

163. (Previously presented): The method of claim 159, wherein said portion of said gene is a fragment of a structural gene.

164. (Previously presented): The method of claim 159, wherein said first and second recombination sites are selected from the group consisting of *lox* sites, *att* sites, and mutants thereof.

165. (Previously presented): The method of claim 159, wherein said first and second recombination sites are selected from the group consisting of *lox* sites and *att* sites.

166. (Previously presented): The method of claim 159, wherein said first and second recombination sites are *lox* sites.

167. (Previously presented): The method of claim 166, wherein said *lox* sites are *lox*P sites.

168. (Previously presented): The method of claim 159, wherein said first and second recombination sites are *att* sites.

169. (Previously presented): The method of claim 168, wherein said *att* sites are selected from the group consisting of *att*B sites, *att*P sites, *att*L sites and *att*R sites.

170. (Previously presented): The method of claim 159, wherein said at least one recombination protein is selected from the group consisting of Cre, Int, IHF, Xis, FLP, γδ, Tn3 resolvase, Hin, Gin, Cin and combinations thereof.

171. (Previously presented): The method of claim 159, wherein said at least one recombination protein is Cre.

172. (Previously presented): The method of claim 159, wherein said at least one recombination protein is selected from the group consisting of Int, IHF and Xis.

173. (Previously presented): The method of claim 159, wherein said at least one recombination protein is Int.

174. (Previously presented): The method of claim 159, wherein said at least one recombination protein is IHF.

175. (Previously presented): The method of claim 159, wherein said at least one recombination protein is Xis.

176. (Previously presented): The method of claim 159, wherein said first nucleic acid molecule or said second nucleic acid molecule or said third nucleic acid molecule is a vector.

177. (Previously presented): The method of claim 176, wherein said vector is an expression vector.

178. (Previously presented): The method of claim 159, wherein said first nucleic acid molecule or said second nucleic acid molecule is linear.

179. (Previously presented): The method of claim 159, further comprising expressing said gene or portion thereof that is operably linked to said promoter.

180. (Previously presented): The method of claim 159, further comprising contacting at least one host cell with said mixture, and selecting for a host cell comprising said third nucleic acid molecule.

181. (Previously presented): The method of claim 180, further comprising selecting against a host cell comprising said first or said second nucleic acid molecule.

182. (Previously presented): The method of claim 180, further comprising selecting against a host cell comprising said first and said second nucleic acid molecules.

183. (Previously presented): The method of claim 180, further comprising expressing said gene or portion thereof that is operably linked to said promoter in said selected host cell.

184. (Previously presented): The method of claim 180, wherein said host cell is a prokaryotic cell.

185. (Previously presented): The method of claim 180, wherein said host cell is a bacterial cell.

186. (Previously presented): The method of claim 180, wherein said host cell is an *Escherichia coli* cell.

187. (Currently amended): A method of producing a nucleic acid molecule comprising:

(a) providing a first nucleic acid molecule comprising at least one promoter and at least a first recombination site;

(b) providing a second nucleic acid molecule comprising at least one antibiotic resistance gene or portion thereof and at least a second recombination site; and

(c) forming a mixture *in vitro* between said first and second nucleic acid molecules and at least one recombination protein, under conditions sufficient to cause recombination *in vitro* between said first and second recombination sites, thereby producing a third nucleic acid molecule in which said promoter

and said antibiotic resistance gene or portion thereof are operably linked to form a functional antibiotic resistance gene,

wherein said at least one recombination protein is not a transposase.

188. (Previously presented): The method of claim 187, wherein said antibiotic resistance gene or portion thereof, is selected from the group consisting of a chloramphenicol resistance gene or a portion thereof, an ampicillin resistance gene or a portion thereof, a methicillin resistance gene or a portion thereof, a tetracycline resistance gene or a portion thereof and a kanamycin resistance gene or a portion thereof.

189. (Previously presented): The method of claim 187, wherein said antibiotic resistance gene or portion thereof is a chloramphenicol resistance gene or a portion thereof.

190. (Previously presented): The method of claim 187, wherein said first and second recombination sites are selected from the group consisting of *lox* sites, *att* sites, and mutants thereof.

191. (Previously presented): The method of claim 187, wherein said first and second recombination sites are selected from the group consisting of *lox* sites and *att* sites.

192. (Previously presented): The method of claim 187, wherein said first and second recombination sites are *lox* sites.

193. (Previously presented): The method of claim 192, wherein said *lox* sites are *lox*P sites.

194. (Previously presented): The method of claim 187, wherein said first and second recombination sites are *att* sites.

195. (Previously presented): The method of claim 194, wherein said *att* sites are selected from the group consisting of *att*B sites, *att*P sites, *att*L sites and *att*R sites.

196. (Currently amended): The method of claim 187, wherein said promoter is located immediately adjacent to said first recombination site.

197. (Currently amended): The method of claim 187, wherein said antibiotic resistance gene or portion thereof is located immediately adjacent to said second recombination site.

198. (Previously presented): The method of claim 187, wherein said at least one recombination protein is selected from the group consisting of Cre, Int, IHF, Xis, FLP, γδ, Tn3 resolvase, Hin, Gin, Cin and combinations thereof.

199. (Previously presented): The method of claim 187, wherein said at least one recombination protein is Cre.

200. (Previously presented): The method of claim 187, wherein said at least one recombination protein is selected from the group consisting of Int, IHF and Xis.

201. (Previously presented): The method of claim 187, wherein said first nucleic acid molecule or said second nucleic acid molecule or said third nucleic acid molecule is a vector.

202. (Previously presented): The method of claim 201, wherein said vector is an expression vector.

203. (Previously presented): The method of claim 187, wherein said first nucleic acid molecule or said second nucleic acid molecule is linear.

204. (Previously presented): The method of claim 187, further comprising contacting at least one host cell with said mixture, and selecting for a host cell comprising said third nucleic acid molecule.

205. (Previously presented): The method of claim 204, further comprising selecting against a host cell comprising said first or said second nucleic acid molecule.

206. (Previously presented): The method of claim 204, further comprising selecting against a host cell comprising said first and said second nucleic acid molecule.

207. (Previously presented): The method of claim 204, wherein said host cell is a prokaryotic cell.

208. (Previously presented): The method of claim 204, wherein said host cell is a bacterial cell.

209. (Previously presented): The method of claim 204, wherein said host cell is an *Escherichia coli* cell.

210. (Previously presented): The method of claim 187, further comprising introducing said third nucleic acid molecule into a host cell.

211. (Previously presented): The method of claim 187, further comprising introducing said third nucleic acid molecule into a host cell and expressing said antibiotic resistance gene or portion thereof.

212. (Previously presented): The method of claim 211, wherein said host cell is an *Escherichia coli* cell.

213. (Currently amended): A method of producing a nucleic acid molecule comprising:

(a) providing a first nucleic acid molecule comprising at least one promoter and at least a first *lox*P site;

(b) providing a second nucleic acid molecule comprising at least one antibiotic resistance gene or portion thereof and at least a second *lox*P site; and

(c) forming a mixture *in vitro* between said first and second nucleic acid molecules and at least one Cre recombination protein, under conditions sufficient to cause recombination *in vitro* between said first and second *lox*P sites, thereby producing a third nucleic acid molecule in which said promoter and said antibiotic resistance gene or portion thereof are operably linked to form a functional antibiotic resistance gene.

214. (Previously presented): The method of claim 213, wherein said antibiotic resistance gene or portion thereof is selected from the group consisting of a chloramphenicol resistance gene or a portion thereof, an ampicillin resistance gene or a portion thereof, a methicillin resistance gene or a portion thereof, a tetracycline resistance gene or a portion thereof and a kanamycin resistance gene or a portion thereof.

215. (Previously presented): The method of claim 213, wherein said antibiotic resistance gene or portion thereof is a chloramphenicol resistance gene or a portion thereof.

216. (Previously presented): The method of claim 213, further comprising introducing said third nucleic acid molecule into a host cell.

217. (Previously presented): The method of claim 213, further comprising introducing said third nucleic acid molecule into a host cell and expressing said antibiotic resistance gene or portion thereof.

218. (Previously presented): The method of claim 216, wherein said host cell is an *Escherichia coli* cell.

219. (Previously presented) The method of claim 217, wherein said host cell is an *Escherichia coli* cell.

220. (Previously presented): The method of claim 151, further comprising contacting at least one host cell with said mixture, and selecting for a host cell comprising said third nucleic acid molecule.

221. (Previously presented): The method of claim 220, further comprising selecting against a host cell comprising said first or said second nucleic acid molecule.

222. (Previously presented): The method of claim 220, further comprising selecting against a host cell comprising said first and said second nucleic acid molecule.

223. (Previously presented): The method of claim 213, further comprising contacting at least one host cell with said mixture, and selecting for a host cell comprising said third nucleic acid molecule.

224. (Previously presented): The method of claim 223, further comprising selecting against a host cell comprising said first or said second nucleic acid molecule.

225. (Previously presented): The method of claim 223, further comprising selecting against a host cell comprising said first and said second nucleic acid molecule.

226. (New): The method of claim 98, wherein said at least one cloning site is a restriction site.

227. (New): The method of claim 134, wherein said at least one cloning site is a restriction site.